

PROCESS AND SYSTEM FOR PRODUCING MULTICOMPONENT SPUNBONDED NONWOVEN FABRICS

ABSTRACT OF THE DISCLOSURE

A system and process is provided for producing spunbond nonwoven fabric. Two or more polymeric components are separately melted and are separately directed through a distribution plate configured so that the separate molten polymer components combine 5 at a multiplicity of spinnerette orifices to form filaments containing the two or more polymer components. Multicomponent filaments are extruded from the spinnerette orifices into a quench chamber where quench air is directed from a first independently controllable blower and into contact with the filaments to cool and solidify the filaments. The filaments and the quench air are directed into and through a filament attenuator and 10 the filaments are pneumatically attenuated and stretched. The filaments are directed from the attenuator into and through a filament depositing unit and are deposited randomly upon a moving continuous air-permeable belt to form a nonwoven web of substantially continuous filaments. Suction air from a second independently controllable blower beneath the air-permeable belt so is drawn through the depositing unit and through the 15 air-permeable belt and web is then directed through a bonder for bonding the filaments to convert the web into a coherent nonwoven fabric.

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